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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,830	04/27/2001	Timothy Fries	355-A	3332

7590 06/26/2002
CIENA Corporation
Legal Department
1201 Winterson Road
Linthicum, MD 21090

EXAMINER

BELLO, AGUSTIN

ART UNIT PAPER NUMBER

2633

DATE MAILED: 06/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

RL4

Office Action Summary

Application No.

09/844,830

Applicant(s)

FRIES ET AL.

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-5, 7, 8, 10, 13-15, 17-23, 26-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Way (U.S. Patent No. 6,366,728).

Regarding Claims 1 and 16, Way teaches an optical communications network transmitting signals on multiple wavelengths, the optical communications network comprising: a first dispersion compensating fiber providing dispersion compensation and dispersion slope compensation, said first dispersion compensating fiber having a first non-zero dispersion coefficient and a first non-zero dispersion slope coefficient (see table 1); a second dispersion compensating fiber in optical communication with said first dispersion compensating fiber (column 8 lines 48-51), said second dispersion compensating fiber having a second non-zero dispersion coefficient and a second non-zero dispersion slope coefficient (see Table 1), a length of said first dispersion compensating fiber and a length said second dispersion compensating fiber are selected to compensate dispersion and compensate dispersion slope simultaneously for the multiple wavelengths in a transmission path in optical communication with said first

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dispersion compensating fiber and said second dispersion compensating fiber (column 9 lines 26-31).

Regarding Claims 2, 3, 17 and 18, Way teaches the optical communications network of claim 1 wherein the first non-zero dispersion coefficient is different from the second non-zero dispersion coefficient and wherein the first non-zero dispersion slope coefficient is different from the second non-zero dispersion slope coefficient (see Table 1).

Regarding Claims 4, 5, 19, and 20 Way teaches the optical communications network of claim 1 wherein the transmission path is an inter-network element section of transmission fiber and wherein the transmission path includes a component in optical communication with the inter-network element section of transmission fiber (column 9 lines 62-67, column 10 lines 1-16, and column 16 lines 41-47).

Regarding Claims 7, 8, 21 and 22, Way teaches the optical communications network of claim 1 wherein the transmission path extends between a first terminal to a second terminal to define a terminal-to-terminal path (see Figure 1) and wherein the transmission path includes a component in optical communication with the terminal-to-terminal path (column 9 lines 62-67, column 10 lines 1-16, and column 16 lines 41-47).

Regarding Claims 10 and 23, Way teaches the optical communications network of claim 1 wherein the length of first dispersion compensating fiber and the length of second dispersion compensating fiber are selected based on a mathematical solution compensating dispersion in the transmission path and compensating dispersion slope in the transmission path (column 8 lines 64-67 and column 9 lines 1-49).

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Regarding Claims 13 and 26, Way teaches the optical communications network of claim 10 wherein the mathematical solution compensates for Nth order dispersion effects in the transmission path, where N is greater than 2 (column 17 lines 9-14, e.g. four-wave mixing).

Regarding Claims 14, 15, 27, and 28, Way teaches the optical communications network of claim wherein the mathematical solution includes a value representing dispersion and dispersion slope introduced by components in the transmission path (e.g. the fibers of the transmission path, column 9 lines 62-67, column 10 lines 1-7, and column 17 lines 21-30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 9, 11, 12, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Way.

Regarding Claims 6 and 9, Way differs from the claimed invention in that Way fails to specifically teach that said first dispersion compensating fiber and said second dispersion compensating fiber are housed in single or separate dispersion compensation modules. However, one skilled in the art would clearly have recognized that the dispersion compensation fibers of Way could have either been housed in either single modules or separate dispersion modules. Way teaches that the dispersion compensation fibers of the invention, although separate or discrete, could be integrated other modules and with each other. This disclosure by Way would have suggested to one skilled in the art that the fibers of the compensation method of Way could

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have been housed in either separate or single dispersion compensation modules. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have housed the dispersion compensation modules of Way in either single or separate dispersion compensation modules.

Regarding Claims 11, 12, 24, and 25, Way differs from the claimed invention in that Way fails to specifically teach the mathematical solution claimed by the applicant. However, Way teaches a similar equation in matrix form from which a mathematical solution describing the lengths of the dispersion compensation fibers can be derived (column 9 lines 1-45). Furthermore, Way also teaches that if the entire length of the transmission cable desired is known, one skilled in the art can compute the lengths of the dispersion compensation fibers in order to reduce or eliminate the residual chromatic dispersion or the residual chromatic dispersion slope. This disclosure by Way would have suggested to one skilled in the art that a mathematical solution exists and can be calculated from which the lengths of dispersion compensation fibers needed can be obtained. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have derived the mathematical solution claimed by the applicant in view of the suggestion by Way.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (703)308-1393. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703)305-4729. The fax phone numbers for the

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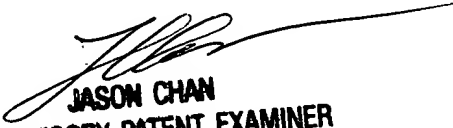
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organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

AB

June 18, 2002


JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600